

# New energy, a whole new story

Flexible, light and resilient,  
resisting the harshest  
environmental conditions.  
Solbianflex photovoltaic modules  
are made using cells with up to  
23% conversion of sunlight into  
electricity.

**All the energy to live your  
passions without limits.**

**SOLBIAN**  
FREEDOM POWERED BY THE SUN

  
MADE IN ITALY

[SOLBIAN.EU](http://SOLBIAN.EU)





# Many good reasons for choosing Solbian

Product quality, durability and maximum performance, always.

- ✓ Because we guarantee the quality of the product and its duration in time.
- ✓ Because our panels are very resilient, thin and extraordinarily flexible, able to adapt to curved surfaces, such as the deck of a boat.
- ✓ Because our panels are ultra-lightweight: only 2.1 kg per square meter, compared to 12 kg and more of traditional panels.
- ✓ Because we manufacture the SP series, with the most efficient solar cells on the market: high power even in very small dimensions.
- ✓ Because the ease of installation, both permanent and removable, is one of the strengths of Solbian: from structural adhesive to steel eyelets, all the different fixing methods provide easy installation.
- ✓ Because we offer a wide range of accessories, designed and manufactured for the marine industry.
- ✓ Because Solbian panels have been tested in extreme conditions by great heroes of sailing: Giovanni Soldini, Sébastien Roubinet, Alessandro Di Benedetto and many others.
- ✓ Because our products are certified according to IEC61215 and IEC 61730. Solbian has also obtained ISO9001 Quality, OHSAS18001 Safety and ISO14001 Environmental certifications.





# Something new under the Sun **SOLBIANFLEX**

No task is too hard for Solbianflex, with a wide range of power available. Three different series using three different technologies: SP, SR and SXp. All with crystalline silicon cells, the most efficient and proven on the market, and using lightweight and flexible encapsulation materials.

**Three levels of power, all winners**

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Photo: The Sense of Wood, winning project at the Bois Lab Workshop on the short wood supply-chain, organized by the Province of Turin and the Polytechnic of Turin. Francesco Zannier.

Power at the highest level.

## SP Series



SP series is at the top of the range, thanks to the use of selected SunPower™ monocrystalline silicon cells, reaching a record 23% conversion of sunlight into electricity and with a pleasant appearance thanks to back-contact technology which hides the electrical contacts. SunPower™ cells represent the most advanced available technology on the market, and make the SP Solbian panels the highest-efficiency flexible panels.

	SP 125	SP 112 L	SP 112 Q	SP 100	SP 75	SP 50 L	SP 50 Q
Power	125 W	112 W	112 W	102 W	76 W	51 W	51 W
Length	1363 mm	1236 mm	855 mm	1109 mm	855 mm	1109 mm	601 mm
Width	546 mm	546 mm	800 mm	546 mm	546 mm	292 mm	546 mm
Thickness	2 mm	2 mm	2 mm	2 mm	2 mm	2 mm	2 mm
Weight	1.7 kg	1.6 kg	1.6 kg	1.4 kg	1.1 kg	0.8 kg	0.8 kg
N. of cells	40	36	36	32	24	16	16

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Super Rugged Series.

## SR Series



The monocrystalline high efficiency SR cells are sandwiched by two patented metallic grids. The grid on the front is carefully tailored to optimize the current harvesting, while the one behind the cell offers strong mechanical support. The grids essentially form a double shield that acts as a conducting reinforcement to the solar cell. Extreme crack and bend tolerance are built in, enabling novel crystalline silicon architectures. A guaranty of high efficiency and unmatched durability in flexible solar panels.

	SR 156 L	SR 156 Q	SR 104	SR 70 L	SR 70 Q	SR 60
Power	156 W	156 W	104 W	70 W	70 W	61 W
Length	1523 mm	1046 mm	1046 mm	1364 mm	728 mm	1205 mm
Width	683 mm	996 mm	683 mm	365 mm	683 mm	365 mm
Thickness	2 mm	2 mm	2 mm	2 mm	2 mm	2 mm
Weight	2.4 kg	2.4 kg	1.6 kg	1.2 kg	1.2 kg	1 kg
N. of cells	36	36	24	16	16	14

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Aesthetics, reliability and price.

## SXp Series



The polycrystalline solar cells used in the SXp series are electrically connected using ultra-thin copper wires that form a very fine mesh on the cell surface, resulting in thousands of contact connected points. This alternative to the standard bus-bar method allows a higher module power and increases the energy yield. This technology is optimally suited to flexible modules, due to its intrinsic insensitivity to micro-cracks, that are the most common cause of energy loss in solar modules. Another advantage is a reduced sensitiveness to shading, a quite important issue in marine and mobility applications. The new connection technology, together with the use of high efficiency polycrystalline silicon cells, makes SXp panels especially powerful and reliable.

	SXp 145 L	SXp 145 Q	SXp 96	SXp 64 L	SXp 64 Q	SXp 56
Power	145 W	145 W	96 W	64 W	64 W	56 W
Length	1523 mm	1046 mm	1046 mm	1364 mm	728 mm	1205 mm
Width	683 mm	996 mm	683 mm	365 mm	683 mm	365 mm
Thickness	2 mm	2 mm	2 mm	2 mm	2 mm	2 mm
Weight	2.4 kg	2.4 kg	1.6 kg	1.2 kg	1.2 kg	1 kg
N. of cells	36	36	24	16	16	14

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## Embed solar in your structure Surface Mounting (SM) option

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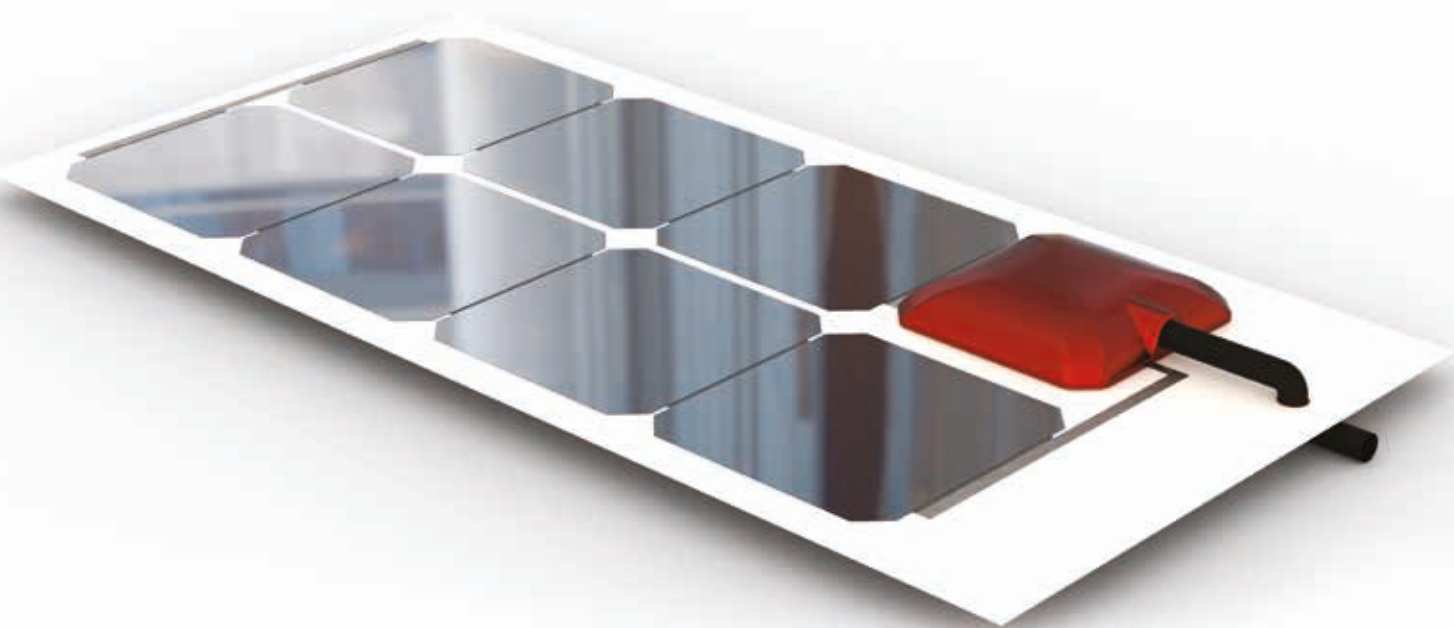
Solbianflex<sup>SM</sup> panels will become part of your boat deck, of your caravan roof or your golf cart hard-top. The SM option consists of a textured surface and of a safe and durable electrical connection via moisture-resistant cables. A custom-made grommet offers a perfect sealing of the electrical contacts and avoids chafing of the cables. Last but not least, SM panels can be offered with ready-to-use structural adhesive.

The external layer of the new front, made by a highly technical fluorinated polymer, assures UV and scratch resistance, and excellent light transmission.

It's never been so easy to get  
the most from SunPower™ cells

# ALLinONE series

Just connect the output cable to your battery.



The SP series, top of the Solbianflex range, in a new ALLinONE version: solar panel + charge controller. All the electronics you need is already packed into the rugged waterproof metal box: a sophisticated MPPT controller capable of boosting the voltage for a perfect fit to your battery.

	SP 23 ALLinONE	SP 47 L ALLinONE	SP 47 Q ALLinONE	SP 72 L ALLinONE
Power	23 W	47 W	47 W	72 W
Battery voltage	12/24 V	12/24 V	12/24 V	12/24 V
Maximum Current	2/1 A	4/2 A	4/2 A	6/3 A
Length	600 mm	1109 mm	601 mm	855 mm
Width	292 mm	292 mm	546 mm	546 mm
Thickness	15 mm	15 mm	15 mm	15 mm
Weight	0.6 kg	0.9 kg	0.9 kg	1.2 kg
N. of cells	7	15	15	23

From the smallest 23W model, ideal to keep your battery charged, to the 72W panel, with enough power to supply the refrigerator on your caravan or boat. The ALLinONE models can be combined simply by connecting each of them directly to your battery, each panel being completely independent from the others, thanks to the integrated charge controllers.



# Charge controllers

Optimal solar energy management in all conditions.



Solbian offers some of the most advanced charge controllers of the market, for optimal solar power management in all conditions. The golden rule for marine applications suggests “one panel, one controller”, but it can be achieved only with a perfect match between the solar generator and the battery to be recharged.

By using our selected DC/DC converters with MPPT optimization system (Maximum Power Point Tracking) you will have all the freedom in choosing panel size and configuration, **and no matter what battery you need to charge (12, 24, 48 V... lead acid or lithium), the charge controller will take care of your needs.**

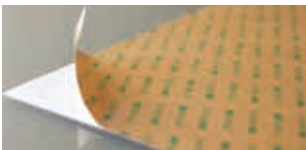
CTEK, GENASUN, WESTERN CO. and VICTRON. Four renowned international brands, the same controllers chosen and tested by professional sailors and by several automotive companies, to harvest as much energy as possible from the sun.

# Connections and fixing options



## Junction Box

Solbianflex panels can be supplied with the junction box to allow connection with the charge controller. Solbian provides a complete kit with cables and connectors for easy installation.



## Structural adhesive

The flexible Solbianflex panels can become an integral part of the boat by means of a special double-sided structural adhesive. The electrical connection can be made via the junction box or by direct connection to the positive and negative poles of the panels (Surface Mounting solution).



## LOXX snap fasteners

Snap fasteners, a special kind of eyelets, make the attachment and removal of the panels easier. They are suitable for installation on canvas as well as on hard surfaces.



## Stainless steel eyelets

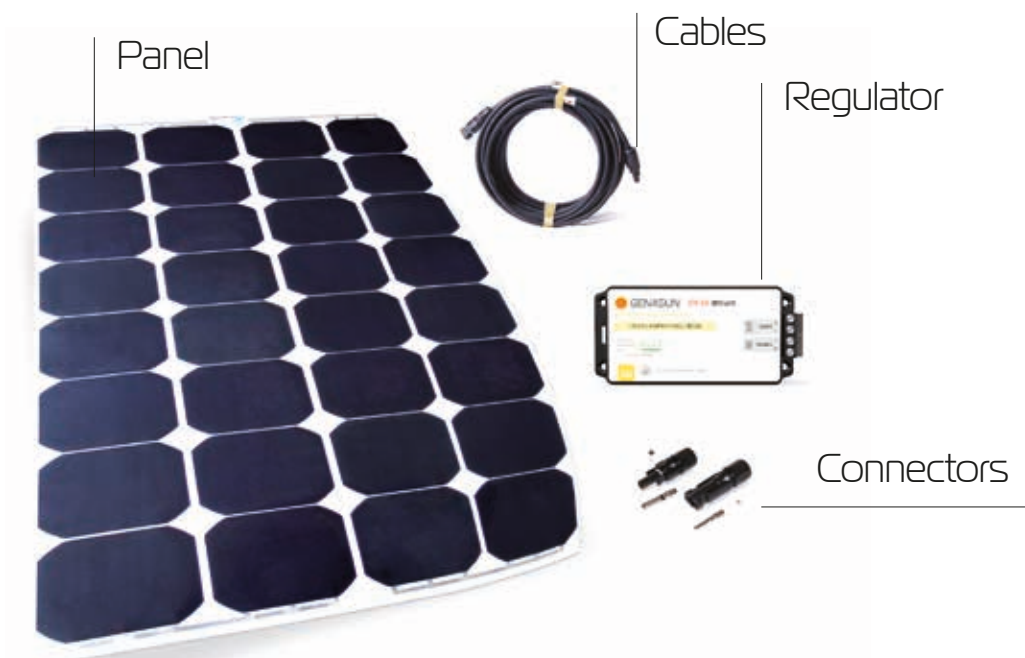
They can be fixed on the edges of the panels to allow easy installation and removal. This solution allows you to fix the panel with ropes or screws.



## Zipper

A zipper can be sewn onto the panel, allowing a removable installation, especially on the bimini.

## Contents of a photovoltaic kit



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